

A NEW SPECIES OF THE GENUS *FOETOREPUS* (PISCES : CALLIONYMIDAE)
QUEENSLAND

TETSUJI NAKABO AND ROLAND J. MCKAY

Nakabo, T. and McKay, R.J. 1989 11 13: A new species of the genus *Foetorepus* (Pisces : Callionymidae) from Queensland. *Mem. Qd Mus.* 27(2): 563-565. Brisbane. ISSN 0079-8835.

A new species of the dragonet fish family Callionymidae is described from deep water off the Queensland coast. *Foetorepus australis* is characterized by having an extremely high first dorsal fin, a very large eye and darker brown marks on the posteroventral parts of the anal and caudal fins.

□ Pisces, Callionymidae, *Foetorepus*, taxonomy.

Tetsuji Nakabo, Department of Fisheries, Faculty of Agriculture, Kyoto University, Kyoto 606, Japan; Roland J. McKay, Queensland Museum, PO Box 300, South Brisbane, Queensland 4101, Australia; 18 August, 1988.

One specimen of an unusual callionymid fish was collected from the upper part of the continental shelf (380 m deep) of Queensland. This specimen belongs to the genus *Foetorepus*, which was first described by Whitley (1931) and redescribed by Nakabo (1982). *Foetorepus* includes some 16 species that are known mostly from sandy-muddy bottoms in deep water near the edge of the continental shelf, and on banks or seamounts. Because the combination of characters of our unusual specimen is not found in other species of *Foetorepus*, we here describe it as a new species.

Methods of counts and measurements follow Nakabo (1982). Vertebral number is counted from the soft X-ray negatives.

***Foetorepus australis* sp. nov.**
(Figs 1-2)

MATERIAL EXAMINED

HOLOTYPE: QM (Queensland Museum) I.21255, a male, 66.8 m SL, off Queensland, 23°59'S, 152°59'E, 380 m, Queensland Fisheries Service, August 8, 1983. In spirit.

DIAGNOSIS

Body elongate and almost cylindrical. Eye very large. Preorbital canal absent. First dorsal fin extremely high, 1st spine longest. Distal margin of 1st and 2nd membrane of 1st dorsal fin dark brown, 3rd membrane almost brown. Distal margin of 2nd dorsal fin dark brown. Posteroventral parts of anal and caudal fins darker brown.

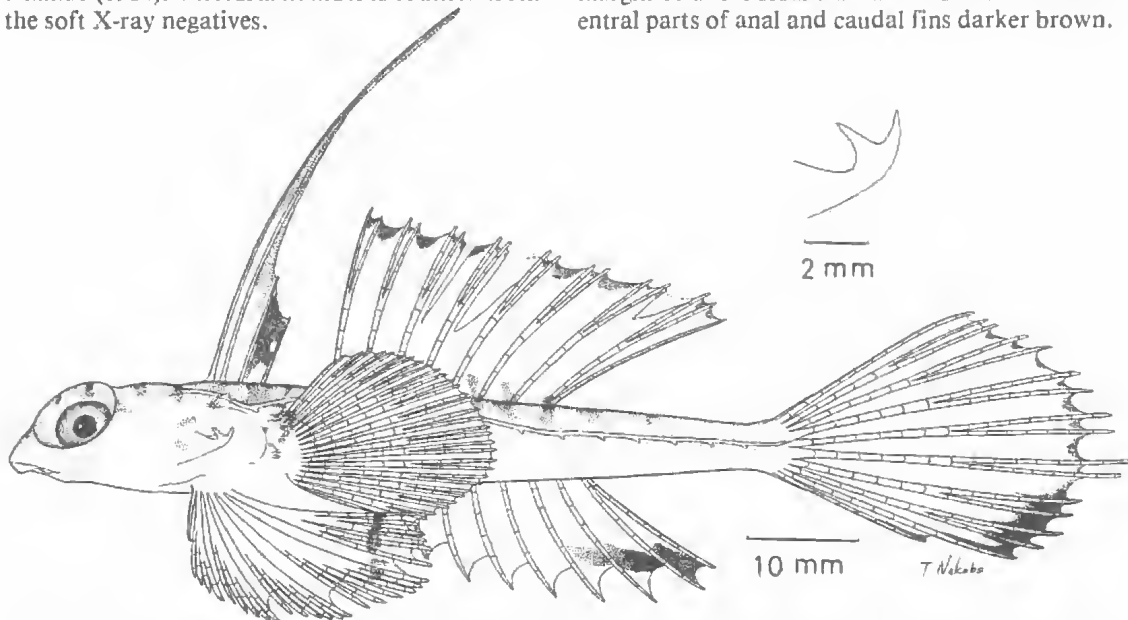


FIG. 1. *Foetorepus australis* sp. nov.; holotype QM I.21255, a male, 66.8 mm SL. Upper, left preopercular spine. Lower, lateral view.

DESCRIPTION

Dorsal fins IV-8; Anal fin 7; Pectoral fin $i+19$; Pelvic fin I, 5; Caudal fin $i+7+ii$; Vertebrae $7+14$.

Proportional measurements as percent of standard length; body width, 19.3; body depth, 15.0; caudal peduncle depth, 6.1; predorsal length, 27.7; caudal fin length, 47.5; head length, 28.6; eye diameter, 12.3; snout length, 7.2; upper jaw length, 8.5; interorbital width, 2.4; 1st dorsal spine length, 59.6; 2nd dorsal spine length, 38.2; 3rd dorsal spine length, 14.7; 4th dorsal spine length, 9.3; 1st dorsal ray length, 24.0; last dorsal ray length, 26.2; 1st anal ray length, 9.9; last anal ray length, 21.7; pectoral fin length, 28.3; pelvic fin length, 34.7; anal papilla length, 1.6

Body elongate, almost cylindrical, slightly depressed. Head slightly depressed. Eye very large. Snout very short, covering almost all of upper jaw. Interorbital space very narrow, and slightly concave. Gill-opening small, oval, placed a little behind origin of 1st dorsal fin. Preopercular spine without an antrorse process at base and with an upward process on inner side; its posterior tip strongly upcurved. Upper jaw protractile; its posterior and exceeding anterior edge of eye. Nostril with a very short tube on each side of preorbital region. Teeth on jaws villiform in broad bands. Palatine and vomer toothless. Anal papilla conical. Infraorbital canal without branch, reaching posteroventral edge of eye; postocular commissure connected to preoperculomandibular canal; preorbital canal absent (Fig. 2). Lateral line single, with very short branches downward on posterior half, reaching base of caudal fin; lateral line of opposite side interconnected by a transverse branch across occiput, but not on dorsal surface of caudal peduncle.

First dorsal fin extremely high, beginning a little before gill-opening; 1st spine longest. Dorsal rays

branched distally except posterior branch of last ray; upper margin almost straight. Anal rays unbranched distally; last ray divided at base; length of rays increasing posteriorly. Pectoral fin rounded, extending beyond 6th dorsal ray. Pelvic fin rounded, reaching 1st anal ray, and connected by membrane to middle part of pectoral fin base. Caudal fin rounded and elongate; middle rays somewhat filamentous.

Color in 50% isopropyl alcohol. Body white with some dark marks on dorsal surface and opercular region. First dorsal fin with dark brown distal margin on 1st and 2nd membranes, and almost dark brown on 3rd membrane. Second dorsal fin transparent with dark distal margin, and with some dark marks near base. Pectoral fin transparent. Pelvic fin transparent with 2 dark brown marks on posterior part. Anal fin transparent with a darker brown line on posterior distal margin. Caudal fin transparent; upper half with narrow dark brown distal margin, lower half with broad darker brown distal margin.

REMARKS

F. australis is similar to *Foetorepus bicornis* (Norman, 1939) from Zanzibar, western Indian Ocean, in having a very high 1st dorsal fin, a very large eye and in the coloration of the anal fin, but differs in the relative length of 2nd to 1st dorsal spines (the former shorter, the latter almost the same), and in the coloration of 1st-2nd dorsal and caudal fins (in *F. bicornis* the 1st dorsal fin is dark with 4 oblique white lines, 2nd dorsal fin with a broader dark band on the distal margin and the caudal fin with a broad dark band on the distal margin).

F. australis differs from the other two Australian *Foetorepus* species, *F. phasis* (Günther, 1880) and *F. apricus* (McCulloch, 1926), in the preopercular spine (the former bicuspid, the latter two

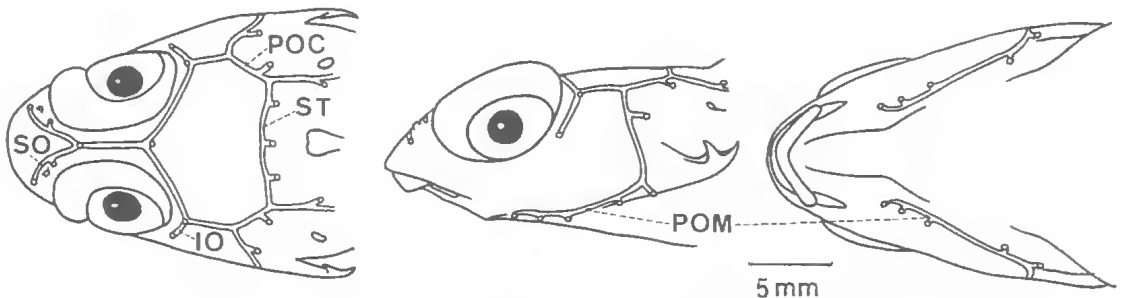


FIG. 2. Cephalic lateral line of *Foetorepus australis*, holotype. Left, dorsal view. Middle, lateral view. Right, ventral view. IO, infraorbital canal; POC, postocular commissure; POM, preoperculomandibular canal; SO, supraorbital canal; ST, supratemporal canal.

tricuspid); the membrane connecting the pelvic fin to the base of the pectoral fin base (present in the former, almost absent in the latter two); and in coloration. *F. apricus* is synonymized with *F. phasis* by Johnson (1971) and Fricke (1981, 1983), but is a separate species to be discussed in a forthcoming paper by the senior author.

LITERATURE CITED

- FRICKE, R. 1981. Revision of the genus *Synchiropus* (Teleostei : Callionymidae). 'Theses Zoologicae Vol. 1'. (J. Cramer: Braunschweig). 194 pp.
1983. Revision of the Indo-Pacific genera and species of the dragonet family Callionymidae. 'Theses Zoologicae Vol. 3'. (J. Cramer: Braunschweig). 774 pp.
- GÜNTHER, A. 1880. Report on the shore fishes procured during the Voyage of H.M.S. 'Challenger' in the years 1837-76. *Rep. Sci. Res. Voyage of H.M.S. 'Challenger' etc.*, *Zool.* 1(6): 1-82.
- JOHNSON, C.R. 1971. Revision of the callionymid fishes referable to the genus *Callionymus* from Australian waters. *Mem. Qd Mus.* 16: 103-140.
- MCCULLOCH, A.R. 1926. Report on some fishes obtained by the F.I.S. 'Endeavour' on the coasts of Queensland, New South Wales, Victoria, Tasmania, south and south-western Australia. *Biological Results of the Fishing Experiments carried on by the F.I.S. 'Endeavour' 1909-14* 5(4): 157-216.
- NAKABO, T. 1982. Revision of genera of the dragonets (Pisces : Callionymidae). *Publ. Seto Mar. Biol. Lab.* 27(1/3): 77-131.
- NORMAN, J.R. 1939. Fishes. *John Murray exp. 1933-34 Sci. Rep.* 7(1): 1-116.
- WHITLEY, G.P. 1931. New names for Australian fishes. *Aust. Zool.* 6(4): 310-314.